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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/830,069	04/23/2004	Ayae Endo	112205.01	7682

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EXAMINER

CAMERON, ERMA C

ART UNIT PAPER NUMBER

1762

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

<b>Application No.</b> 10/830,069	<b>Applicant(s)</b> ENDO ET AL	
<b>Examiner</b> Erma Cameron	<b>Art Unit</b> 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on \_\_\_\_\_.
- 2a)  This action is FINAL.
- 2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-10 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-10 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on 23 April 2004 is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. 10/095,048.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other: \_\_\_\_\_

*re*

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-5 and 7-10 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method wherein the heterocyclic solvent has a boiling point equal to or more than 170 degrees C, does not reasonably provide enablement for a method wherein the heterocyclic solvent is not restricted to this BP. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

See [0019]. This boiling point range is necessary to prevent solute deposition or discharge clogging.

3. Claims 1 and 3-10 rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method using an ink-jet discharge device, does not reasonably provide enablement for any discharge device. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

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See [0024] and [0025]. It appears that an inkjet device is necessary to make the finely patterned lines of the claimed invention.

4. Claims 1-10 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

See [0039]. The examiner cannot find furazane in either a chemical dictionary or in the CAS Registry database.

5. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

See [0004]. In what way does furan or tetrahydrofuran have substituents?

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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7. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Claim 1: it is not clear what the composition is applied to.

b) Claim 1 and 4: from a group including should be put into proper Markush terminology – selected from the group consisting of.

d) Claim 1: it is not clear what is meant by substituent. In what way does furan, one of the solvents used by applicant, have a “substituent”?

e) Claim 5: does this claim mean that an electro-luminescent material is the same as the conductive, insulative or semiconductive material of claim 1, or is the electro-luminescent material in addition to the materials of claim 1?

f) Claims 5 and 7: why is “materials” in the plural, particularly when preceded by the singular article “a”?

g) Claim 7: it is not clear what is meant by compound having a furan materials? Does this mean that the compound is a furan, or only incorporates a furan?

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h) Claim 9: there is no antecedent basis for “another organic solvent”. A first organic solvent has not been mentioned.

i) Claim 10: it is not clear which of the two solvents is referred to as “said solvent”.

j) Claim 10: it is not clear what “that includes a benzene derivative” modifies. It appears to modify “heterocyclic compound”. From [0022] it appears that it should modify the other solvent. If it modifies “heterocyclic compound”, there is no antecedent basis for “heterocyclic compound that includes a benzene derivative”.

k) Claim 2: it is not clear how an ink-jet device could create a “film”.

### *Claim Objections*

8. Claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

9. Claim 8 is objected to because of the following informalities:

-spelling error.

Appropriate correction is required.

### ***Double Patenting***

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1-10 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 6-9 of U.S. Patent No. 6787063. Although the conflicting claims are not identical, they are not patentably distinct from each other because the conductive, insulative and semiconductive materials of '069 would be inclusive of the electroluminescence material of '063.

***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-4, 6- 7 and 9-10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Specht et al (4155767).

'767 teaches ink-jet printing with an ink that contains a binder, THF and another solvent such as a ketone or ester (5:25-7:40). The binder meets the limitations of the materials of Claims 1 or 4. The THF solvent, one of those used by applicant, would inherently have a BP>170. Because "that includes a benzene derivative" in claim 10 appears to modify "heterocyclic compound", the ketone or ester solvents of '767 meet claims 9 and 10. The drying of the ink would inherently be a heat treatment, even if it is the heat of room temperature.

14. Claims 1- 5 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by EP 892028

'028 teaches making an el element with an ink-jet method, using a precursor of an organic polymer, a fluorescent dye, and coumarin, The precursor meets the limitations of the material of claim 1, the dye meets the limitations of electro-luminescent material, and coumarin is an oxygen-containing heterocyclic (see attachment of Registry sheet). See Abstract and claims.



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The drying of the ink would inherently be a heat treatment, even if it is the heat of room temperature.

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Specht et al (4155767).

'767 is applied here for the reasons given above.

'767 fails to teach that the solvent is 2,3-dihydrobenzofuran.

It would have been obvious to one of ordinary skill in the art to have substituted one high-boiling, oxygen-containing solvent (THF) for another (2,3-dihydrobenzofuran), in the '767 process, with the expectation of equivalent results.

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***Specification***

17. The chemical formulas on pages 10 and 11 are somewhat fuzzy. They should be replaced with clearer images.

***Priority***

18. Applicant's claim for domestic priority should be updated.

***Conclusion***


19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erma Cameron whose telephone number is 571-272-1416. The examiner can normally be reached on 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
ERMA CAMERON  
PRIMARY EXAMINER  
June 8, 2005

Erma Cameron  
Primary Examiner  
Art Unit 1762